34. An apparatus as recited in claim 33, wherein said cell includes a solid phase support for conduct of a binding reaction.

35. An apparatus as recited in claim 33, wherein said apparatus includes a working electrode for the conduct of an electrochemiluminescence assay.

36. An apparatus as recited in claim 33, wherein said sonication means is a piezoelectric device.

37. An assay system for conducting a binding assay for the detection or quantitation of an analyte comprising:

(a) a cartridge comprising a cell;

(b) a cartridge receptacle including means for structurally coupling to said cell in said cartridge;

(c) means for sonicating the contents of said cell; and

(d) means for selectively detecting or quantitating light from each of said binding domains.

38. An assay system as recited in claim 37, wherein said cartridge further includes one or more electrodes each of said one or more electrodes having one or a plurality of binding domains, each of said domains containing a reagent capable of binding a component of a binding electrochemiluminescence assay.

39. An assay system as recited in claim 37, wherein said cell further includes a diaphragm

40. An assay system as recited in claim 37, wherein said means for sonicating the contents of said cell includes a piezoelectric device.

41. A method for conducting an electrochemiluminescence binding assay comprising the steps of:

(a) introducing a composition containing an electrochemiluminescent moiety into a cell including a working electrode;

(b) sonicating said composition in said cell with means structurally coupled to said cell;

(c) applying electrical energy to said electrode to cause said electrochemiluminescent moiety to luminesce; and

(d) detecting or quantitating the electrochemiluminescence from said cell.

42. A method as recited in claim 41, wherein said sonicating means is a piezoelectric device.

43. A method as recited in claim 41, for cleaning debris in said cell.

44. A method for conducting an electrochemiluminescence binding assay comprising the steps of:

(a) introducing a composition containing an electrochemiluminescent moiety into a cell including one or more electrodes each comprising a composite containing a matrix and a multiplicity of carbon particles dispersed therein, each of said one or more electrodes having one or a plurality of binding domains, each of said domains containing a reagent capable of binding a component of a binding electrochemiluminescence assay;

(b) sonicating said composition in said cell with means structurally coupled to said cell;

(c) applying electrical energy to said electrode to cause a said electrochemiluminescent moiety bound to said one or a plurality of binding domains to luminesce; and

(d) detecting or quantitating the electrochemiluminescence from said cell.

45. A method for conducting a kinetic binding assay by electrochemiluminescence comprising the steps of:

(a) introducing a composition containing an electrochemiluminescent moiety into a cell including one or more electrodes each of said one or more electrodes having one or a plurality of binding domains, each of said domains containing a reagent capable of binding a component of a binding electrochemiluminescence assay;

(b) sonicating said composition in said cell with means structurally coupled to said cell;

(c) applying electrical energy to said electrode to cause a said electrochemiluminescent moiety bound to said one or a plurality of binding domains to luminesce so as to carry out a kinetic assay; and

(d) detecting or quantitating the electrochemiluminescence from said cell.

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